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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,680	07/23/2003	Tetsuya Otsuki	116568	6686
25944	7590	04/05/2005	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			TRAN, LONG K	
			ART UNIT	PAPER NUMBER
			2818	

DATE MAILED: 04/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/624,680	Applicant(s) OTSUKI, TETSUYA	
	Examiner Long K. Tran	Art Unit 2818	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 96,97,105 and 112 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 96,97,105 and 112 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's Response to the Election/Restriction requirement filed February 10, 2005 has been entered. **Species III**, Claims **96, 97, 105** and **112** have been elected with traverse. The traversal is on the ground(s) that :

Applicant also argues that: "if the search and examination of the entire application can be made without burden, the examiner must examine it on the merits, even though it includes claims to independent or distinct inventions". There is no record that shows the search of separate classification or separate status in the art, or different field of search as defined in MPEP § 808.02. can be made without burden.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claim is generic.

The Applicant's arguments are not found persuasive.

The requirement is still deemed proper and is therefore made FINAL.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed on January 16, 2004.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2818

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims **96, 97, 105** and **112** are rejected under 35 U.S.C. 102(b) as being anticipated by Gorowitz et al. (US Patent no. 5,524,339).

5. Regarding claims **96** and **112**, Gorowitz discloses semiconductor device 10 (fig. 1(b)) comprising:

a substrate 11 (fig. 1(b)) including a depression section 11a (fig. 1(b));

a semiconductor chip 12 (fig. 1(b)) mounted in the depression section of the substrate with a surface of the semiconductor chip on which an electrode 12a/12b (fig. 1(b)) is formed facing upward (col. 6, lines 23 – 32);

a first conductive layer 22 (fig. 1(b)) formed over the substrate and the semiconductor chip so that the first conductive layer is electrically connected with the electrode 12a/12b (fig. 1(b)) of the semiconductor chip;

an insulating layer 30 (fig. 1(b)), at least a part of the insulating layer being disposed on the first conductive layer;

and a second conductive layer 32 , (fig. 1(b)) at least a part of the second conductive layer being disposed on the insulating layer over the first conductive layer.

Regarding claim **97**, Gorowitz discloses a resin layer (col. 1, lin1 67) formed in the depression section in which the semiconductor chip is mounted, wherein the first conductive layer is formed to pass over the resin layer.

Regarding claim **105**, Gorowitz discloses a multilayer circuit board being provided to interconnect a various package chip (col. 2, lines 51 – 53).


Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Suyama (US Patent no. 6,403,463), Watchtler et al. (US Patent no. 6,274,391), Ma et al. (US Patent no. 6,709,898) and Towle et al. (US Patent no. 6,555,906) disclose semiconductor similar to that of Gorowitz et al. and the claimed invention.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Long K. Tran whose telephone number is 571-272-1797. The examiner can normally be reached on Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1787. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Long Tran 

March 30, 2005


David Nelms
Supervisory Patent Examiner
Technology Center 2800